United States
Environmental Protection
Agency

Public Affairs (Mail Drop 5)
Research Triangle Park,
North Carolina 27711

May 30, 2000

Science of Predicting Harmful Algal Blooms and Their Effects Presented at EPA Symposium

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Research Triangle Park, NC.....Scientists will discuss how to develop better measurement tools or indicators to predict the occurrence of harmful algal blooms and determine their effects on human health and the environment at a symposium to be held June 6-8 at the Sheraton Imperial Conference Center in Research Triangle Park, NC.

The symposium entitled "*Indicators in Health and Ecological Risk Assessment*" is sponsored by the U.S. Environmental Protection Agency's National Health and Environmental Effects Research Laboratory. Risk assessors and managers will join nationally and internationally-recognized scientists at six sessions on Harmful Algal Blooms; Endocrine Disrupting Chemicals; Persistent Bioaccumulating Toxicants; Ambient Ozone, Global Atmospheric Change, and Coastal Ecosystem Integrity. The symposium is free, but registration is required.

Drs. Kenneth Hudnell and Rick Greene, EPA scientists who conduct research on the human and ecological effects of harmful algal blooms, are co-chairmen of the session on harmful algal blooms which includes nine presentations by nationally-renowned scientists on the most recent science to better identify, track and predict blooms and determine their effects on humans and aquatic ecosystems. The session will be held 12:30 p.m. - 5 p.m. on June 6 and 8 a.m. to 10:45 a.m. June 7.

"As is the case for natural disasters, federal, state and local agencies need improved early warning indicators to enable them to respond quickly to minimize or reduce their health, environmental and economic impacts and to better understand the causes of blooms and how to control or prevent them," says Greene, who is stationed at the Gulf Ecology Division in Florida which houses EPA's only dedicated culture facility for harmful algal blooms.

Many of the species that form harmful algal blooms produce potent neurotoxins that are known to cause serious human illnesses through ingestion of contaminated seafood, and, in some cases, through direct contact with water and inhalation of aerosolized toxins. These toxins have also been implicated in large-scale mortalities of fish, birds and other aquatic animals. *Pfiesteria piscicida* and/or morphologically related organisms (Pf-MRO) have been linked to human health problems and to large scale fish mortality and morbidity from Delaware to North Carolina.

Experts studying the health effects of harmful algal blooms in freshwater, estuaries and marine waters will discuss public health concerns and development of measurement tools to identify health problems. EPA's Hudnell has found preliminary evidence that contact with *Pfiesteria* may cause vision problems that last over a long period of time. The vision test is being developed as an indicator that contact with the neurotoxin(s) has occurred in order to

assist physicians in diagnosing Pf-MRO related illness.

For more information on speakers or to register, visit the symposium web site at: http://www.epa.gov/nheerl/symposium/